enhancement provider for the purpose of implementing such Lender's or other entity's protection provisions contained in this Agreement and allowing such Lender or other entity reasonable means to protect and preserve its interest and/or lien (including the lien of the Security Instrument) on the occurrence of a Company Default or S&W Default under the terms of this Agreement. State, Company and S&W each agree to execute and deliver (and to acknowledge, if necessary, for recording purposes) any agreement necessary to effect any such amendment; provided, however, that State shall not be obligated to agree to any such amendment it reasonably determines would in any way affect the Term, the benefits to be provided State under Section 3.3 or any payments due State under this Agreement, or otherwise in any other material respect adversely affect any rights or obligations of State under this Agreement.

(b) If State desires to finance, refinance, or sell its interests in and benefits under this Agreement, Company and S&W hereby agree to deliver to any lender or purchaser designated by State such financial statements of Company and annual report of S&W as may reasonably be required by such lender or purchaser. Such statements shall include the past two years' financial statements of Company and S&W, shall be prepared in accordance with generally accepted accounting principles.

Section 18.5 Estoppel Certificates.

- (a) At any time and from time to time, within 15 Days after written request of Company, any Lender or any permitted assignee to do so, State, without charge, shall certify to its best knowledge by written instrument duly executed and acknowledged, to any Lender or permitted assignee, or proposed Lender or proposed permitted assignee, as follows:
- (i) as to whether this Agreement has been supplemented or amended, and if so, the substance and manner of such supplement or amendment, attaching a copy thereof to such certificate:
- (ii) as to the authorization and force and effect of this Agreement and the thenoutstanding Permits, in accordance with their terms;
 - (iii) as to the existence of any Company Default or S&W Default;
- (iv) as to the existence of events which, by the passage of time or notice or both, would constitute a Company Default or S&W Default;
 - (v) as to the existence of any Claims by State regarding this Agreement;
 - (vi) as to the commencement and expiration dates of the Term; and
 - (vii) as to any other matters of fact as may be reasonably requested.
- (b) Any such certificate may be relied upon by Company and S&W (except for statements Company or S&W knows or has reason to know are not correct), and any Lender or

- (i) as to whether this Agreement has been supplemented or amended, and if so, the substance and manner of such supplement or amendment, attaching a copy thereof to such certificate;
- (ii) as to the authorization and force and effect of this Agreement and the thenoutstanding Permits, in accordance with their terms;
 - (iii) as to the existence of any Company Default or S&W Default;
- (iv) as to the existence of events which, by the passage of time or notice or both, would constitute a Company Default or S&W Default;
 - (v) as to the existence of any Claims by State regarding this Agreement;
 - (vi) as to the commencement and expiration dates of the Term; and
 - (vii) as to any other matters of fact as may be reasonably requested.
- (b) Any such certificate may be relied upon by Company and S&W (except for statements Company or S&W knows or has reason to know are not correct), and any Lender or permitted assignee to whom the same may be delivered, and the contents of such certificate shall be binding on State (except as between Company and State and S&W and State, for statements Company or S&W knows or has reason to know are not correct).
- Section 18.6 Participation in Proceedings. Lenders shall have the right to participate in every administrative determination, arbitration and judicial proceeding initiated under <u>Section 16.7</u> that would affect their interests.
- Section 18.7 No Surrender. No cancellation, surrender or modification of this Agreement shall be effective unless consented to in writing by a majority in interest of all Lenders (based on the principal amount of Project Debt held by them), which consent shall be obtained by Company; provided that such consent shall not be required with respect to modifications of this Agreement that do not adversely affect the rights or obligations of Company or Lenders.

ARTICLE XIX ASSIGNMENT

Section 19.1 Assignment by Company or S&W.

- (a) Neither Company nor S&W, without the prior written approval of State, may voluntarily or involuntarily assign, convey, transfer, pledge, mortgage or otherwise encumber all or any portion of its interests in this Agreement or the Network (each and collectively an "assignment") except:
- (i) to a Lender as a condition of obtaining financing solely benefiting the Network or its operation, administration or maintenance, provided S&W and Company retain responsibility for the performance of their respective obligations under this Agreement;
- (ii) to any Lender or other acquirer of the interests of Company and S&W which is a Substituted Entity pursuant to the exercise of remedies under the Lender's Security Instruments, assignment in lieu of the exercise of such remedies or other proceedings, and subsequent thereto from any such Lender or acquirer to any Substituted Entity as is acceptable to such Lender or acquirer; provided that such Substituted Entity satisfies Section 18.2(n), and assumes in writing full responsibility for performance of, all the obligations of Company and S&W under this Agreement and the Permits arising from and after the date of assignment or such portion of the obligations as State may agree to as provided in Section 18.2(e); or
- (iii) any lien right S&W may have respecting its provision of services under this Agreement.
- (b) Any transfer of the right or practical ability to control the policies and decisions of Company or S&W, whether due to transfer of partnership or membership interests, shares, beneficial interests, participation interests, joint venture interests, management rights or otherwise, without State's prior written approval, shall constitute an assignment prohibited under subsection (a) above. In considering whether to grant such approval, State, acting in good faith, will consider whether the transferee will complement, support and enhance the financial resources, qualifications, experience, expertise and project management ability of Company and its constituent members or S&W.
- (c) It is the policy and intent of State and Company to encourage equity, joint venture and other forms of shared participation in the business of Company respecting the Network by other participants in the telecommunications industry, provided such participation is on financial and other terms acceptable to Company in its sole discretion. State shall exercise its approval rights under this Section according to such policy and intent.
- (d) State shall not arbitrarily withhold approval of any proposed assignments by Company or S&W for which approval is required.

Section 19.2 Assignment by MnDOT or DOA. Each of MnDOT and DOA may transfer and assign its interests in this Agreement to any other public agency or entity as permitted by law, provided that the successor or assignee has assumed all the obligations, duties and liabilities of MnDOT or DOA, as the case may be, under this Agreement then in effect, and has provided Company and S&W with reasonable assurance of its legal and financial authority to honor and perform the same.

Section 19.3 Notice and Assumption. Except as provided in Section 18.2(c), an assignment permitted under Section 19.1 or otherwise approved in writing by State shall be effective only upon State's receipt of written notice of the assignment and a written assumption by the assignee of all of the obligations, duties and liabilities of Company or S&W, as the case may be, under this Agreement and the Permits then in effect. The assignor and assignee shall give State written notice of the assignment not less than 30 Days prior to the effective date thereof.

Section 19.4 Change of Name. In the event any party changes its name, such party agrees to promptly furnish the other parties with written notice of change of name and appropriate supporting documentation.

ARTICLE XX MISCELLANEOUS

Section 20.1 No Gift or Dedication. Nothing contained in this Agreement shall be deemed to be a gift or dedication of the Network or the underlying work product to State or the general public or for any public use or purpose whatsoever, or be deemed to create any rights in the Network or the underlying product except as expressly set forth herein.

Section 20.2 Notices.

Whenever under the provisions of this Agreement it shall be necessary or (a) desirable for one party to serve any notice, request, demand, report or other communication on another party, the same shall be in writing and shall not be effective for any purpose unless and until received by the addressee or unless served (i) personally; (ii) by independent, reputable. overnight commercial courier; (iii) by facsimile transmission (A) where the transmitting party includes a cover sheet identifying the name, location and identity of the transmitting party, the phone number of the transmitting device, the date and time of transmission and the number of pages transmitted (including the cover page), (B) where the transmitting device or receiving device records verification of receipt and the date and time of transmission receipt and the phone number of the other device, and (C) where the facsimile transmission is immediately followed by service of the original of the subject item in the manner provided in clause (i), (ii) or (iv) hereof; (iv) by electronic mail where the transmission is immediately followed by service of the original of the subject item in the manner provided in clause (i). (ii) or (iv) hereof, or (v) by deposit in the United States mail, postage and fees fully prepaid, registered or certified mail, with return receipt requested, addressed as follows:

If to State, to the designated State Project Manager, whose name and address until further notice is:

Mr. Adeel Lari
Director, Office of Alternative Financing
Minnesota Department of Transportation
Mail Stop 445, Room 214
395 John Ireland Boulevard
St. Paul, Minnesota 55155-1899

Fax: (612) 296-3019

With a copy to:

Minnesota Department of Administration 500 Centennial Building 658 Cedar Street
St. Paul, Minnesota 55155
Attn: Mr. William J. Schnellman
Director, Telecommunications Division

Fax: (612) 297-5368

With an additional copy to:

Office of the Attorney General 535 Park St., Suite 200 St. Paul, Minnesota 55103 Attn: Donald J. Mueting, Esq. Assistant Attorney General Fax: (612) 297-1235

With an additional copy to:

Nossaman Guthner Knox & Elliott, LLP 445 South Figueroa Street 31st Floor
Los Angeles, California 90071
Attn: Fredric W. Kessler, Esq. or Geoffrey S. Yarema, Esq. Fax: (213) 612-7801

If to Company:

ICS/UCN LLC 910 15th Street, Suite 500 Denver, Colorado 80003 Attn: Al Strock

Fax: (303) 595-8707

With a copy to:

McGrann Shea Franzen Carnival Straughn & Lamb, Chartered 2200 LaSalle Plaza 800 LaSalle Avenue Minneapolis, Minnesota 55402-2041

Attn: Henry M. Helgen III, Esq.

Fax: (612) 339-2386

and to:

Douglas R. Wright, Esq.
Parcel, Mauro, Hultin & Spaanstra, P.C.
1801 California Street, Suite 3600
Denver, Colorado 80202
Fax: (303) 295-3040

If to S&W:

Stone & Webster Engineering Corporation c/o S&W Communications Services Group 7677 East Berry Avenue Englewood, Colorado 55402 Attn: Mr. Bruce R. Bulger, Vice President Fax: (303) 741-7180

With a copy to:

Stone & Webster Engineering Corporation 245 Summer Street Boston, Massachusetts 02210 Attn: S. Paul Werzanski, Esq. General Counsel

Fax: (616) 589-1322

(b) Any party may, from time to time, by notice in writing served upon the other party as aforesaid, designate an additional and/or a different mailing address or an additional and/or a different person to whom all such notices, requests, demands, reports and communications are thereafter to be addressed. Any notice, request, demand, report or other communication served personally shall be deemed delivered upon receipt, if served by mail or independent courier shall be deemed delivered on the date of receipt as shown by the addressee's registry or certification receipt or on the date receipt at the appropriate address is refused, as shown on the records or manifest of the U.S. Postal Service or independent courier, and if served

by facsimile transmission shall be deemed delivered on the date of receipt as shown on the received facsimile (provided the original is thereafter delivered as aforesaid).

Section 20.3 Binding Effect. Subject to the limitations of Article XIX, this Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective legal representatives, successors and permitted assigns, and wherever a reference in this Agreement is made to any of the parties hereto, such reference also shall be deemed to include, wherever applicable, a reference to the legal representatives, successors and permitted assigns of such party, as if in every case so expressed.

Section 20.4 Relationship of Parties.

- (a) The relationship of Company and/or S&W to State shall be one of an independent contractor, not an agent, partner, joint venturer, employee or lessee, and State shall have no rights to direct or control the activities or governance of Company or S&W or any Company Party or S&W Party.
- (b) Officials, employees and agents of State shall in no event be considered employees, agents, partners or representatives of Company or S&W or any Lender.
- Section 20.5 No Additional-Party Beneficiaries. Nothing contained in this Agreement is intended or shall be construed as creating or conferring any rights, benefits or remedies upon, or creating any obligations of the parties hereto toward, any person or entity not a party to this Agreement, except rights expressly contained herein for the benefit of Lenders.
- Section 20.6 Time Limit for State Approvals. Unless a specific time is provided elsewhere in this Agreement, whenever State's, MnDOT's or DOA's approval of any matter is required under this Agreement, State, MnDOT or DOA, as the case may be, shall have 30 Days after receiving the matter in question to issue its approval or disapproval; provided that such 30 Day time limit only applies if Company and S&W include with their submission written notice to State that pursuant to this Section 20.6 State has 30 Days to provide written approval or disapproval. If the submittal includes such notice and State fails to act within the 30 Day period, then the matter in question shall be deemed approved.

Section 20.7 Waiver.

- (a) No waiver by any party of any right or remedy under this Agreement shall be deemed to be a waiver of any other or subsequent right or remedy under this Agreement. The consent by one party to any act by the other party requiring such consent shall not be deemed to render unnecessary the obtaining of consent to any subsequent act for which consent is required, regardless of whether similar to the act for which consent is given.
- (b) No act, delay or omission done, suffered or permitted by one party or its agents, such as but not limited to State's exercise of its rights under <u>Section 16.3</u> to cure or perform Company's or S&W's covenants, shall be deemed to waive, exhaust or impair any right, remedy

or power of such party hereunder, or to relieve the other party from the full performance of its obligations under this Agreement.

- (c) No waiver of any term, covenant or condition of this Agreement shall be valid unless in writing and signed by the obligee party.
- (d) The acceptance of any payment or reimbursement by a party shall not: (i) waive any preceding or then-existing breach or default by the other party of any term, covenant or condition of this Agreement, other than the other party's prior failure to pay the particular amount or part thereof so accepted, regardless of the paid party's knowledge of such preceding or then-existing breach or default at the time of acceptance of such payment or reimbursement; or (ii) continue, extend or affect (A) the service of any notice, any suit, arbitration or other legal proceeding or final judgment, (B) any time within which the other party is required to perform any obligation or (C) any other notice or demand.
- (e) No custom or practice between the parties in the administration of the terms of this Agreement shall be construed to waive or lessen the right of a party to insist upon performance by the other party in strict compliance with the terms of this Agreement.

Section 20.8 Application of Laws and Regulations. Nothing in this Agreement is intended or shall be construed as imposing upon Company or S&W or the Network any regional or local Laws or Regulations which would not be applicable to State in its design, acquisition, construction, installation, operation, administration, maintenance, repair or replacement of the Network.

Section 20.9 Governing Law and Venue. This Agreement shall be governed, interpreted and construed in accordance with the laws of the State of Minnesota without regard to choice of law principles. Venue for any legal action (exclusive of appeals) arising out of this Agreement shall lie in Ramsev County, Minnesota.

Section 20.10 Use of Police Power. Nothing in this Agreement limits the authority of State to exercise its regulatory and police powers granted by law, including but not limited to its powers of condemnation with respect to all or any part of the Network and any of Company's or S&W's rights hereunder. By entering into this Agreement, neither Company nor S&W are waiving any of their rights under the United States Constitution or the Minnesota State Constitution, including but not limited to provisions prohibiting the impairment of contracts.

Section 20.11 Survival. Any cause of action or right to bring any cause of action for breach of any covenants, agreements, representations and warranties made in or pursuant to this Agreement or the S&W Guaranty or for indemnification under this Agreement shall expire in accordance with the terms of this Agreement and the S&W Guaranty or applicable statutes of limitations or statutes of repose. Any cause of action or right to bring any cause of action for said breaches that survives the aforesaid expiration shall otherwise survive the expiration or earlier termination of this Agreement or the S&W Guaranty, subject to applicable statutes of limitation or statutes of repose.

Section 20.12 Construction and Interpretation of Agreement.

- (a) The language in all parts of this Agreement shall in all cases be construed simply, as a whole and in accordance with its fair meaning and not strictly for or against any party. The parties hereto acknowledge and agree that this Agreement has been prepared jointly by the parties and has been the subject of arm's length and careful negotiation over a considerable period of time, that each party has been given the opportunity to independently review this Agreement with legal counsel, and that each party has the requisite experience and sophistication to understand, interpret and agree to the particular language of the provisions hereof. Accordingly, in the event of an ambiguity in or dispute regarding the interpretation of this Agreement, this Agreement shall not be interpreted or construed against the party preparing it, and instead other rules of interpretation and construction shall be utilized.
- (b) If any term or provision of this Agreement, the deletion of which would not adversely affect the receipt of any material benefit by either party hereunder, shall be held by a court of competent jurisdiction to be invalid or unenforceable, the remainder of this Agreement shall not be affected thereby and each other term and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law. It is the intention of the parties to this Agreement and the parties hereto agree, that in lieu of each clause or provision of this Agreement that is illegal, invalid or unenforceable, the court shall supply as a part of this Agreement an enforceable clause or provision as similar in terms to such illegal, invalid or unenforceable clause or provision as may be possible.
- (c) The captions of the articles, sections and subsections herein are inserted solely for convenience and under no circumstances are they or any of them to be treated or construed as part of this instrument.
- (d) References in this instrument to this "Agreement" mean, refer to and include this instrument as well as any riders, exhibits, addenda and attachments hereto (which are hereby incorporated herein by reference) or other documents expressly incorporated by reference in this instrument. Any references to any covenant, condition, obligation and/or undertaking "herein," "hereunder" or "pursuant hereto" (or language of like import) mean, refer to and include the covenants, conditions, obligations and undertakings existing pursuant to this instrument and any riders, exhibits, addenda, attachments or other documents affixed to or expressly incorporated by reference in this instrument. All terms defined in this instrument shall be deemed to have the same meanings in all riders, exhibits, addenda, attachments or other documents affixed to or expressly incorporated by reference in this instrument unless the context thereof clearly requires the contrary. All references to articles and sections refer to the articles and sections set forth in this Agreement. All references to a subsection "above" or "below" refer to the denoted subsection within the section in which the reference appears.
- (e) As used in this Agreement and as the context may require, the singular includes the plural and vice versa, and the masculine gender includes the feminine and vice versa.

Section 20.13 Counterparts. This instrument may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

Section 20.14 Entire Agreement; Amendment.

- (a) This Agreement constitutes the entire and exclusive agreement between the parties relating to the specific matters covered in this Agreement. All prior or contemporaneous verbal or written agreements, understandings, representations and/or practices relative to the foregoing are hereby superseded, revoked and rendered ineffective for any purpose. This Agreement may be altered, amended or revoked only by an instrument in writing signed by each party hereto. No verbal agreement or implied covenant shall be held to vary the terms hereof, any statute, law or custom to the contrary notwithstanding.
- (b) The parties intend this Agreement to set forth in full all requirements applicable to the study, planning, design, development, construction, procurement, installation, operation, administration, maintenance, repair, management, renewal, replacement and financing of the Network and the uses, rights and benefits of State relating thereto and to define in full the rights and responsibilities of each party in connection therewith. To the extent requirements and rights and responsibilities have not been addressed in this Agreement, the parties agree to negotiate in good faith to obtain agreement. The parties agree to carry out their respective responsibilities in the spirit of cooperation contemplated by this Agreement, recognizing that they may not have defined in sufficient detail or anticipated fully all activities necessary for the full implementation of the Network.

Section 20.15 Acceptance by State. This Agreement shall not become binding upon State unless and until executed by the Commissioner of MnDOT and the Commissioner of DOA or his or her authorized representative and approved in accordance with Minn. Stat. Ch. 16B.

IN WITNESS WHEREOF, the parties, intending to be legally bound, have executed this Agreement on the date first written above.

Ctata.	
SIMILE	•

THE STATE OF MINNESOTA, acting by and through:

The Commissioner of the Department of Transportation

By:

James M. Denn, Commissioner, Minnesota

Department of Transportation

and

The Commissioner of the Department of Administration

By:

Elaine S. Hansen, Commissioner, Minnesota

Department of Administration

Approved as to form and execution:

By:

Donald J. Mueting, Esq., Assistant Attorney General,

State of Minnesota

By:

Scott Wilensky, Esq., Assistant Attorney General,

State of Minnesota

Company.	A Colorado limited Liability Company
	By: Universal Communication Networks, LLC, A Colorado limited Liability Company, its Manager
	By:
	Title: President
Limited Liability Compan	PPHEE185 CAST
State of OconADO	
State of OconANO County of Source) ss.
On this day of	ECEMBER , 1997, Alfonso Strock
	(Name)
Personally known to me, did	d swear that he is the <u>President</u> of (Title)
Universal Communication Name of LLC)	Networks, LLC a limited liability company under the laws of
the state of Colorado	, and executed this instrument on behalf
of the company by authority	of it's Board of Governor's on behalf of the company.

TCS/IICN LLC.

Company:

S&W:

STONE & WEBSTER ENGINEERING CORPORATION,

a Massachusetts corporation

By:

W. F. Griffith, Vice President

STATE OF GEORGIA

COUNTY OF FULTON

On this 16th day of December, 1997, William F. Griffith, personally known to me, did swear that he is a Vice President of Stone & Webster Engineering Corporation, a corporation under the laws of the state of Massachusetts, and executed this instrument on behalf of the corporation by authority of its Board of Directors on behalf of the corporation.

Notary Public

My Commission Expires 8/25/98

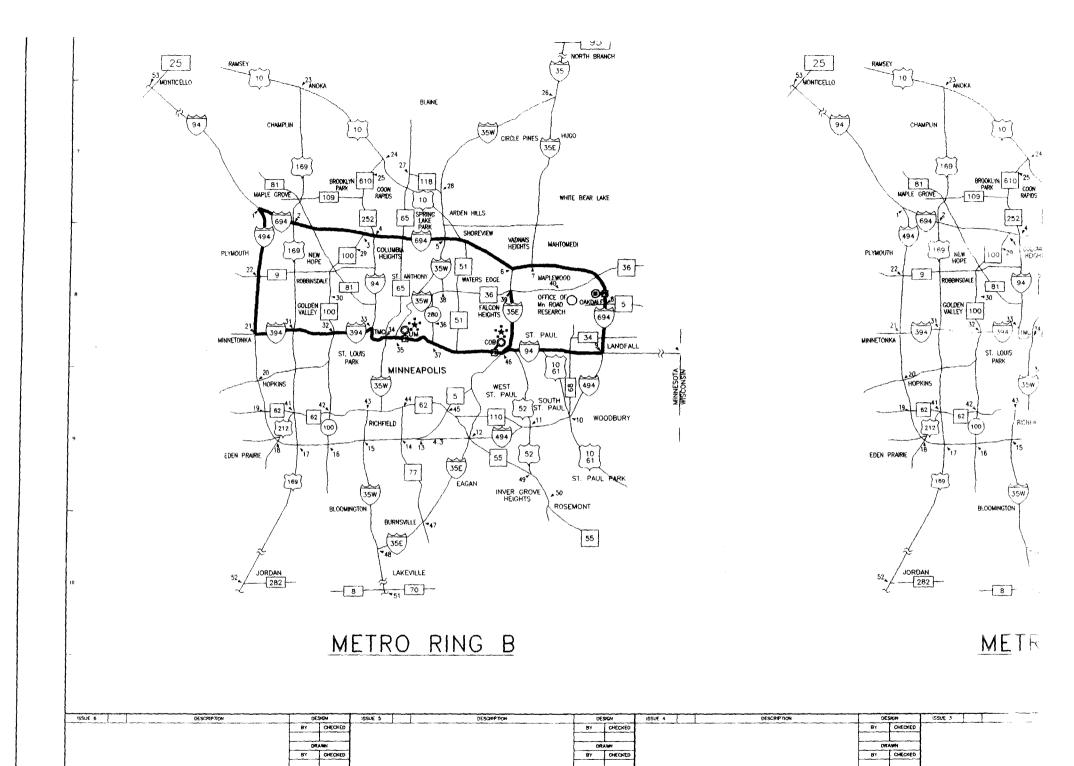
(SEAL)

EXHIBIT A

Network Architecture: Maps, Tables and Narrative Descriptions

(Attached)

LA\973110018 -1-



RESP ENGINEER

ARCH CIVIL CONC STL PIPING PS. FAC INST ELEC

APPR DATE

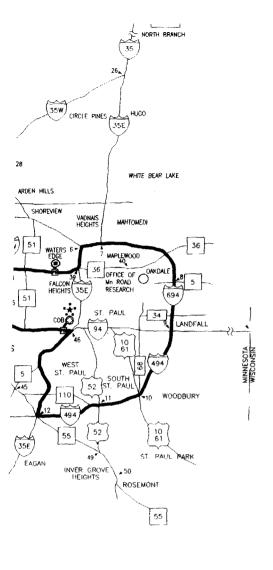
RESP ENGINEER

ARCH CIVIL CONC STL

RESP ENGINEER

ARCH CIVIL CONC STL PIPING PS. FAC INST ELEC

APPR DATE



LEGEND FOR CITY

U.S. HIGHWAY

INTERSTATE HIGHWAY

STATE ROADS

COUNTY ROAD

MN DOT OFFICE

MNET OFFICE

MN DOT & MNET OFFICES

PULL/SPLICE BOX

CEV (BELOW GRADE CONTROLLED ENVIRONMENT VAULT)

MILEAGE MARKER

OC48 NODE

OC12 NODE

OC3 NODE

DACS (DIGITAL-ACCESS AND CROSS-CONNECT SYSTEM LOCATION)

PHASE 1 ROUTE

NOTES:

- 1. PHASE 1 SPURS BETWEEN POINTS 16 TO 17, 39 TO 46, AND 30 TO 32, ARE FOR OPTIONAL PHASE 1 RING EXTENSIONS.
- 2. PULL BOX SPACING NOT TO EXCEED 2 MILES IN METRO AREAS AND 4 MH FS IN RURAL ARFAS. PULL BOXES, HUTS, OR CEV'S WILL BE LOCATED AT REST STOPS, TRAVEL INFORMATION CENTERS, AND THE ALBERTVILLE MIROAD SITE AS REQUIRED BY THE AGREEMENT.
- 3. PULL BOXES, HUTS, OR CEV'S MAY ALSO BE LOCATED AT OR NEAR MAJOR INTERSECTIONS, MAJOR EXCHANGES, MODOT TRUCK STATIONS, STATE PATROL OFFICES, RWIS STATIONS, AND WEIGH STATIONS ADJOINING THE ROUTE. PULL BOXES. HUTS AND CEV'S WILL BE LOCATED ON THE RIGHT OF WAY WHENEVER POSSIBLE SUBJECT TO MNDOT APPROVAL.
- 4. STATE FIBER COUNT (DARK FIBER) AND STATE CAPACITY (LIT FIBER) AS SHOWN IN THE SCHEDULE OF DEPLOYMENT IS AS REQUIRED BY THE AGREEMENT. PULL BOXES FOR REST AREAS, TRAVEL INFORMATION CENTERS, AND THE ALBERTVILLE MIROAD SITE ARE AS REQUIRED BY THE AGREEMENT. ALL OTHER DESIGN INFORMATION SUCH AS, BUT NOT LIMITED TO, NODE LOCATIONS, NODE CAPACITY LEVELS. AND ROUTING, IS SHOWN FOR ILLUSTRATION AND IS SUBJECT TO MODIFICATION, CHANGE, OR RELOCATION DURING DETAIL DESIGN OR DURING CONSTRUCTION.

RING C

STONE & WEBSTER PROPRIETARY

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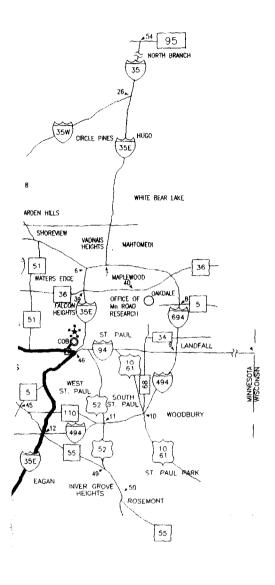
EXHIBIT A

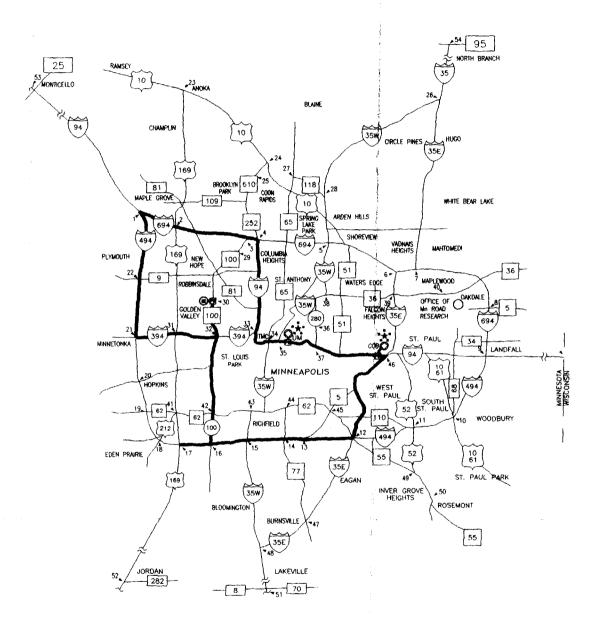
TWIN CITIES METRO MAP RING DETAILS

MINNESOTA FIBER OPTIC BACKBONE PROJECT STATE OF MINNESOTA

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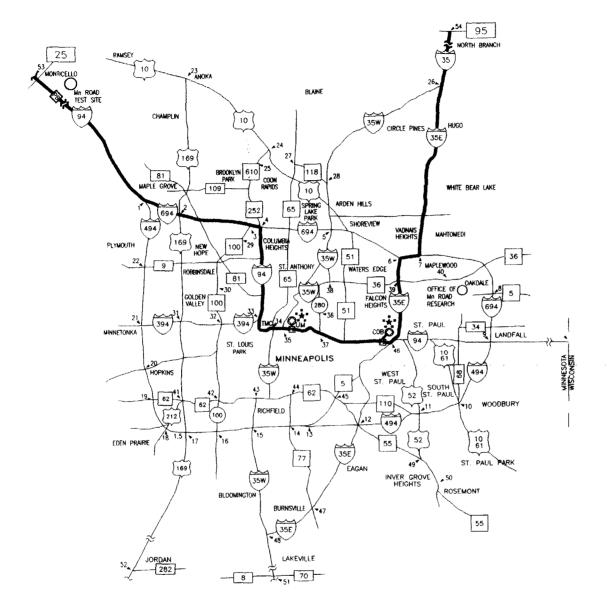
DRAWING



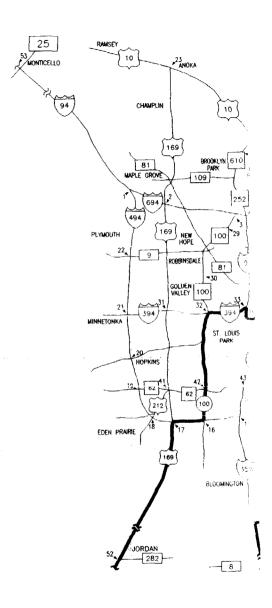


METRO RING A

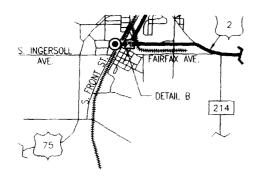
RING



NORTH RING



SOU

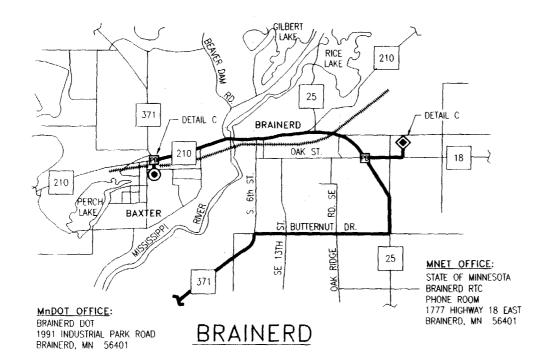


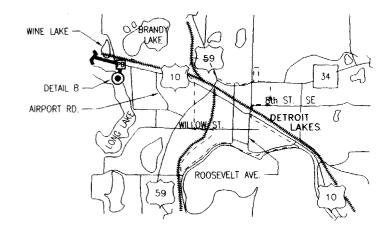
CROOKSTON

MnDOT OFFICE: CROOKSTON DOT BOX 617 (1320 SUNFLOWER) CROOKSTON, MN 56716



BEMIDJI





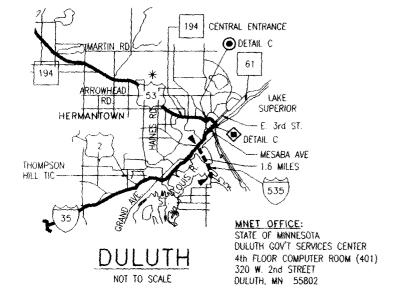
DETROIT LAKES

MnDOT OFFICE:
DETROIT LAKES DOT
1000 W. HIGHWAY 10
DETROIT LAKES, MN 56501

ISSUE 6 DESCRIPTION	DESIGN	ISSUE 5 DESCRIPTION	DESIGN	ISSUE 4 DESCRIPTION	DESIGN	ISSUE 3
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MNDOT OFFICE: DULUTH DOT 1123 MESABA AVENUE DULUTH, MN 55811



LEGEND FOR CITY

U.S. HIGHWAY

INTERSTATE HIGHWAY

STATE ROADS

COUNTY ROAD

AIRPORT

MN DOT OFFICE

MNET OFFICE

PULL/SPLICE BOX

HUT

CEV (BELOW GRADE CONTROLLED

ENVIRONMENT VAULT)

PEDESTAL

MILEAGE MARKER

QC48 NODE

OC12 NODE

OC3 NODE

CITY LIMIT

BUILT-UP AREA

PHASE 1 ROUTE

OPTIONAL PHASE 1 ROUTE

REST AREA

NOTES:

- 1. SCALE: 1" = 1 MILE (APPROXIMATE) UNLESS OTHERWISE NOTED.
- 2. PULL BOX AT BEMIOJI REST AREA WILL BE INSTALLED ONLY IF FINAL ROUTE CROSSES HIGHWAY 371 AND 5th STREET
- 3. PULL BOX SPACING NOT TO EXCEED 2 MILES IN METRO AREAS AND 4 MILES IN RURAL AREAS. PULL BOXES, HUTS, OR CEV'S WILL BE LOCATED AT REST STOPS, TRAVEL INFORMATION CENTERS, AND THE ALBERTVILLE MOROAD SITE AS REQUIRED BY THE AGREEMENT.
- 4. PULL BOXES, HUTS, OR CEV'S MAY ALSO BE LOCATED AT OR NEAR MAJOR INTERSECTIONS, MAJOR EXCHANGES, MIDOT TRUCK STATIONS, STATE PATROL OFFICES, RWIS STATIONS, AND WEIGH STATIONS ADJOINING THE ROUTE. PULL BOXES, HUTS AND CEV'S WILL BE LOCATED ON THE RIGHT OF WAY WHENEVER POSSIBLE SUBJECT TO MNOOT APPROVAL
- 5. STATE FIBER COUNT (DARK FIBER) AND STATE CAPACITY (LIT FIBER) AS SHOWN IN THE SCHEDULE OF DEPLOYMENT IS AS REQUIRED BY THE AGREEMENT. PULL BOXES FOR REST AREAS. TRAVEL INFORMATION CENTERS, AND THE ALBERTVILLE MIROAD SITE ARE AS REQUIRED BY THE AGREEMENT. ALL OTHER DESIGN INFORMATION SUCH AS, BUT NOT LIMITED TO, NODE LOCATIONS, NODE CAPACITY LEVELS, AND ROUTING, IS SHOWN FOR ILLUSTRATION AND IS SUBJECT TO MODIFICATION, CHANGE, OR RELOCATION DURING DETAIL DESIGN OR DURING CONSTRUCTION.

EXHIBIT A

CITY VICINITY MAPS SHEET 1 of 2

MINNESOTA FIBER OPTIC BACKBONE PROJECT STATE OF MINNESOTA

> 12-10-97 E.\MNDOT\R12164B.DWG

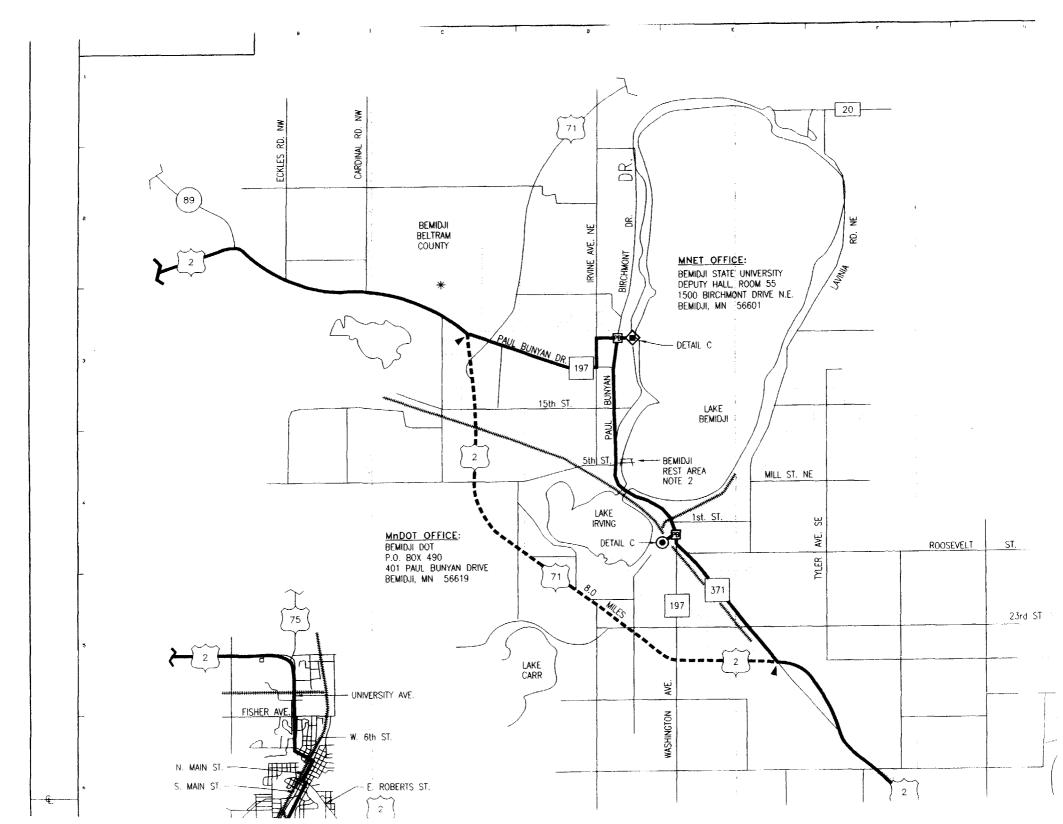
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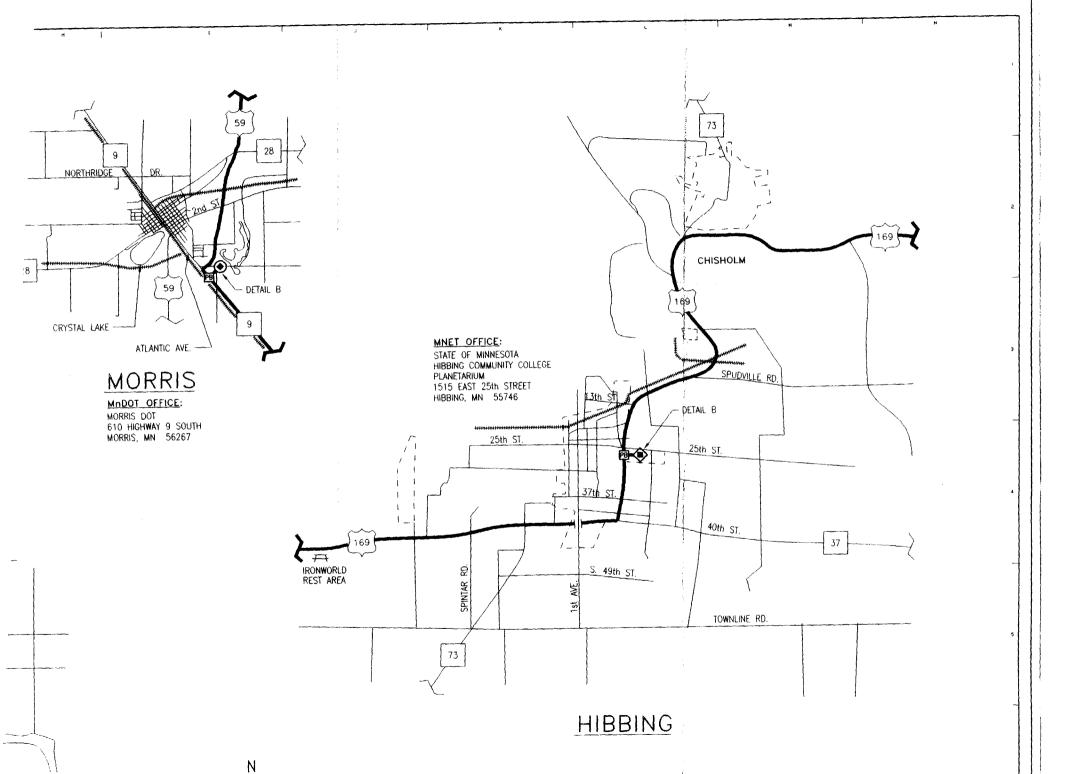
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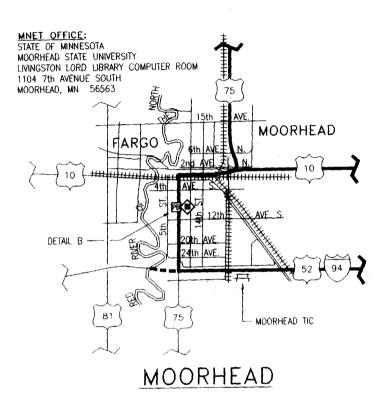
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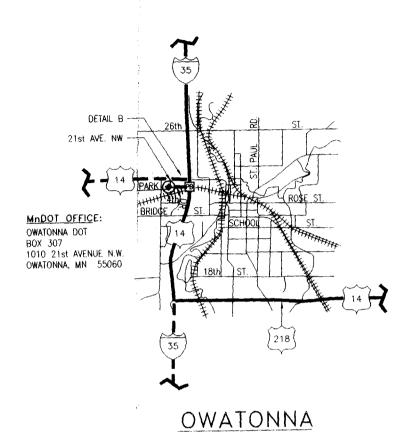
STONE & WEBSTER PROPRIETARY

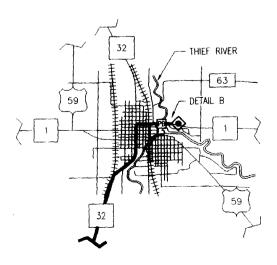
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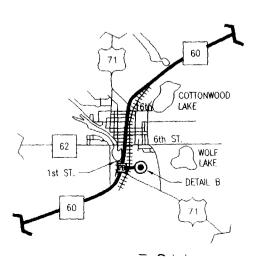








DRIVE 56258



LEGEND FOR CITY

U.S. HIGHWAY

INTERSTATE HIGHWAY

STATE ROADS

COUNTY ROAD

** AIRPORT

MN DOT OFFICE

MNET OFFICE

PB PULL/SPLICE BOX

HUT

CEV (BELOW GRADE CONTROLLED ENVIRONMENT VAULT)

STATE OF MINNESOTA NORTHLAND COMMUNITY COLLEGE PHONE ROOM 1101 HIGHWAY 1 EAST THIEF RIVER FALLS, MN 56701

WINDOM DOT P.O. BOX 427 CO. RD. 26 WINDOM, MN 56101

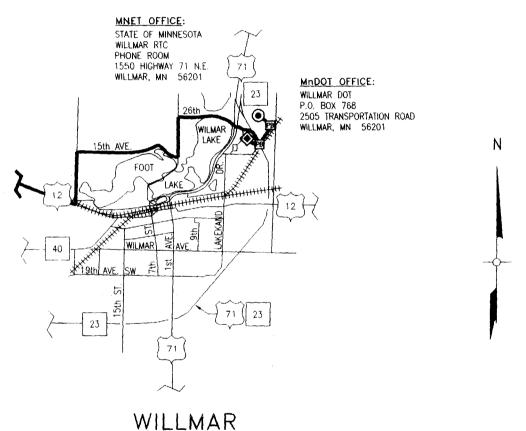
- OC48 NODE
- OC12 NODE
- OC3_NODE

CITY LIMIT

PHASE 1 ROUTE

= = OPTIONAL PHASE 1 ROUTE

FT REST AREA



MOTES:

- †. SCALE: 1" = 1 MILE (APPROXIMATE) UNLESS OTHERWISE NOTED.
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- 4. STATE FIBER COUNT (DARK FIBER) AND STATE CAPACITY (LIT FIBER) AS SHOWN IN THE SCHEDULE OF DEPLOYMENT IS AS REQUIRED BY THE AGREEMENT. PULL BOXES FOR REST AREAS, TRAVEL INFORMATION CENTERS, AND THE ALBERTVILLE MAROAD SITE ARE AS REQUIRED BY THE AGREEMENT. ALL OTHER DESIGN INFORMATION SUCH AS, BUT NOT LIMITED TO, NODE LOCATIONS, NODE CAPACITY LEVELS, AND ROUTING, IS SHOWN FOR ILLUSTRATION AND IS SUBJECT TO MODIFICATION, CHANGE, OR RELOCATION DURING DETAIL DESIGN OR DURING CONSTRUCTION.

EXHIBIT A

CITY VICINITY MAPS SHEET 2 of 2

MINNESOTA FIBER OPTIC BACKBONE PROJECT STATE OF MINNESOTA

12-10-97 F:\MNDQT\R12165B.DWG

RELEASE

AUTOCAD

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DRAWING

되고

STONE & WEBSTER PROPRIETARY

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